5. Fantasy

Program Name: Fantasy.java Input File: fantasy.dat

You really like doing fantasy basketball, but since you don't want to use ESPN or Yahoo's sites, you decide to write your own. For the sake of clarity, we're going to call every player in the league a "participant". You decide to implement the mode of fantasy basketball called "head to head", where each week two participants get matched up, and either one of them wins, or it is a tie. Each participant has a team of N professional players, whose stats get added together throughout the week into a total for that participant.

These stats consist of 9 categories:

1. field goal percentage
2. free throw percentage
3. three pointers made
4. points
5. rebounds
6. assists
7. steals
8. blocks
9. turnovers.

For the first two stats, the higher percentage wins, for the next 6 the higher count wins, and for turnovers the lower number wins. Each participant gets a **fantasy point** for winning a category, and if a category is tied, neither participant gets points. Note: for field goals and free throws, if the number attempted is 0, they have a percentage of 0%. Also, the percentages are the team's percentage. For example, if one player is 6/6 and the other player on the team is 0/2, the participant's percentage is 6/8, or 75%. Your job is to write a program that, given these stats, determine which participant wins that week's match-up.

Input

- The first line will contain the number of test cases T.
- Each test case starts with one line, containing two strings and an integer N: The name of participant A, the name of participant B, and the number of players on each participant's team.
- The next N lines each contain one of participant A's players, and the next N lines each contain one of participant B's players.
- The format for a player is 11 space separated integers, in this order:
    - Field goals made
    - Field goals attempted
    - Free throws made
    - Free throws attempted
    - 3 pointers made
    - Points
    - Rebounds
    - Assists
    - Steals
    - Blocks
    - Turnovers.

Output

If one participant has more total **fantasy points** than the other, output "<Participant name> wins!", else output "Tie.".

Example Input File

```
2
Lebron Durant 1
15 22 2 5 1 33 7 3 4 0 8
10 22 7 10 1 28 8 3 2 0 5
Lebron Durant 2
12 20 9 9 1 34 3 3 0 0 3
16 23 6 8 4 42 9 6 2 0 3
12 23 5 5 4 33 7 5 2 0 3
15 30 10 12 2 42 3 10 2 0 5
```

Example Output to Screen

```
Tie.
Lebron wins!
```

Explanation of the example

Lebron's team has a field goal percentage of 15/22 = 0.68, while Durant's team has a field goal percentage of 10/22 = 0.45, so Lebron wins this category. Lebron has a free throw percentage of 2/5 = 0.4 and Durant has a free throw percentage of 7/10 = 0.7, so Durant wins this category. Durant and Lebron have the same number of three pointers made, so neither of them get a point for that. Lebron has 33 points whereas Durant has 28, so Lebron wins there. Lebron has 7 assists, whereas Durant has 8, so Durant wins that. They are tied in assists and blocks, but Lebron wins in steals whereas Durant wins in turnovers. This brings us to Lebron having 3 vs Durant having 3, with 3 ties, so it is a tie.

In the second test case, the totals become:
Lebron's team
28 43 15 17 5 76 12 9 2 0 6
Durant's team
27 53 15 17 6 75 10 15 4 0 8
Lebron wins FG%, they tie FT%, Durant has more 3PM, Lebron has more points and rebounds, Durant has more assists and steals, they tie in blocks, and Lebron has fewer turnovers. The total team points are thus 4 Lebron, 3 Durant, and 2 ties, so Lebron wins.